(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 6 April 2006 (06.04.2006)

PCT

(10) International Publication Number WO 2006/036001 A3

- (51) International Patent Classification: H02M 3/155 (2006 01)
- (21) International Application Number:

PCT/JP2005/018397

(22) International Filing Date:

28 September 2005 (28 09 2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2004-287092

30 September 2004 (30 09 2004) JF

- (71) Applicant (for all designated States except US): RICOH COMPANY, LTD. [JP/JP], 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo, 1438555 (JP)
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): YOSHII, Kohji [JP/JP], 920-50, Shidehara, Sanda-shi, Hyogo, 6691506 (JP)
- (74) Agent: ITOH, Tadahiko, 32nd Floor, Yebisu Garden Place Tower, 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6032 (JP)

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

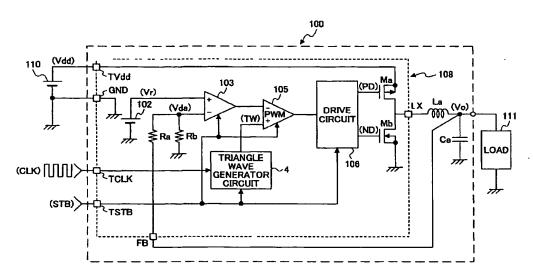
Published:

with international search report

(88) Date of publication of the international search report: 1 June 2006

For two letter codes and other abbreviations, refer to the "Guid ance Notes on Codes and Abbreviations" appearing at the begin ning of each regular issue of the PCT Gazette

(54) Title: SWITCHING REGULATOR



(57) Abstract: The switching regulator has switching transistors that are operated by external clocks It transfers its mode into stand-by mode by detecting suspension of the external clocks

